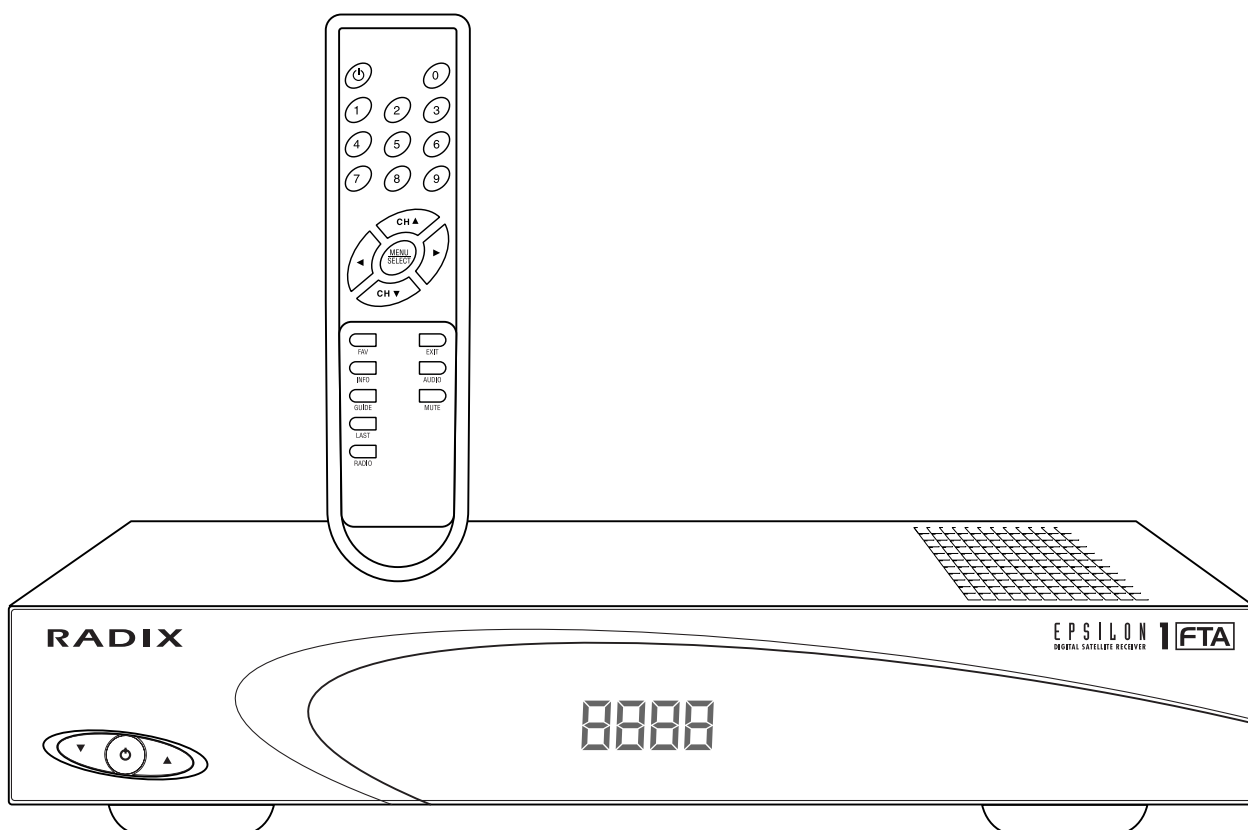


Users Guide

EPSILON 1 FTA
DIGITAL SATELLITE RECEIVER

GB



Read these instructions carefully before using this appliance. • Retain for future reference.
RADIX shall not be liable for damages resulting from improper use of this appliance.

Introduction

1 Introduction

Thank you for purchasing your RADIX EPSILON 1 FTA digital satellite receiver. In doing so you have chosen an appliance built for the future, allowing you to take advantage of numerous programmes and additional services such as electronic programme guides which will eventually replace conventional analogue transmissions.

All RADIX products are manufactured to the highest standards at our ISO 9002 accredited manufacturing plants.

In the unlikely event that you experience technical difficulties with your receiver, please note the following:

If it is necessary to return your receiver, please send it together with all its accessories and in its original packaging to your local dealer, from which you bought it and include a copy of your invoice or receipt as well as a detailed description of the problem. Please ensure you affix adequate postage to the package.

We hope you enjoy using RADIX digital satellite receiver!

Publisher's statement:

EPSILON 1 FTA Instruction Manual

RADIX Electronic Vertriebs-GmbH • D-61381 Friedrichsdorf • F.R. Germany

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Important Safety Notes

3 Important Safety Notes

This appliance is designed exclusively for receiving satellite signals. It must not be used for any other purpose. Keep the appliance out of reach of children. To avoid injury and to avoid damaging your receiver, please note the following:



DANGER:

Do not remove cover - risk of electric shock!

All repairs must be carried out by authorised service personnel.



DANGER:

Protect from moisture - risk of electric shock!



DANGER:

Do not place any objects into slots or ventilation holes - risk of electric shock!



WARNING:

Do not cover ventilation holes - risk of fire through overheating!



WARNING:

Only use original spare parts or professionally recommended spare parts. Failure to do so may result in damage or injury and will cancel the guarantee.

CAUTION:

Switch the appliance off during electrical storms or if it not used for long periods.

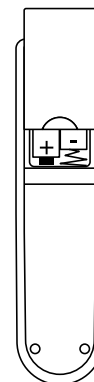
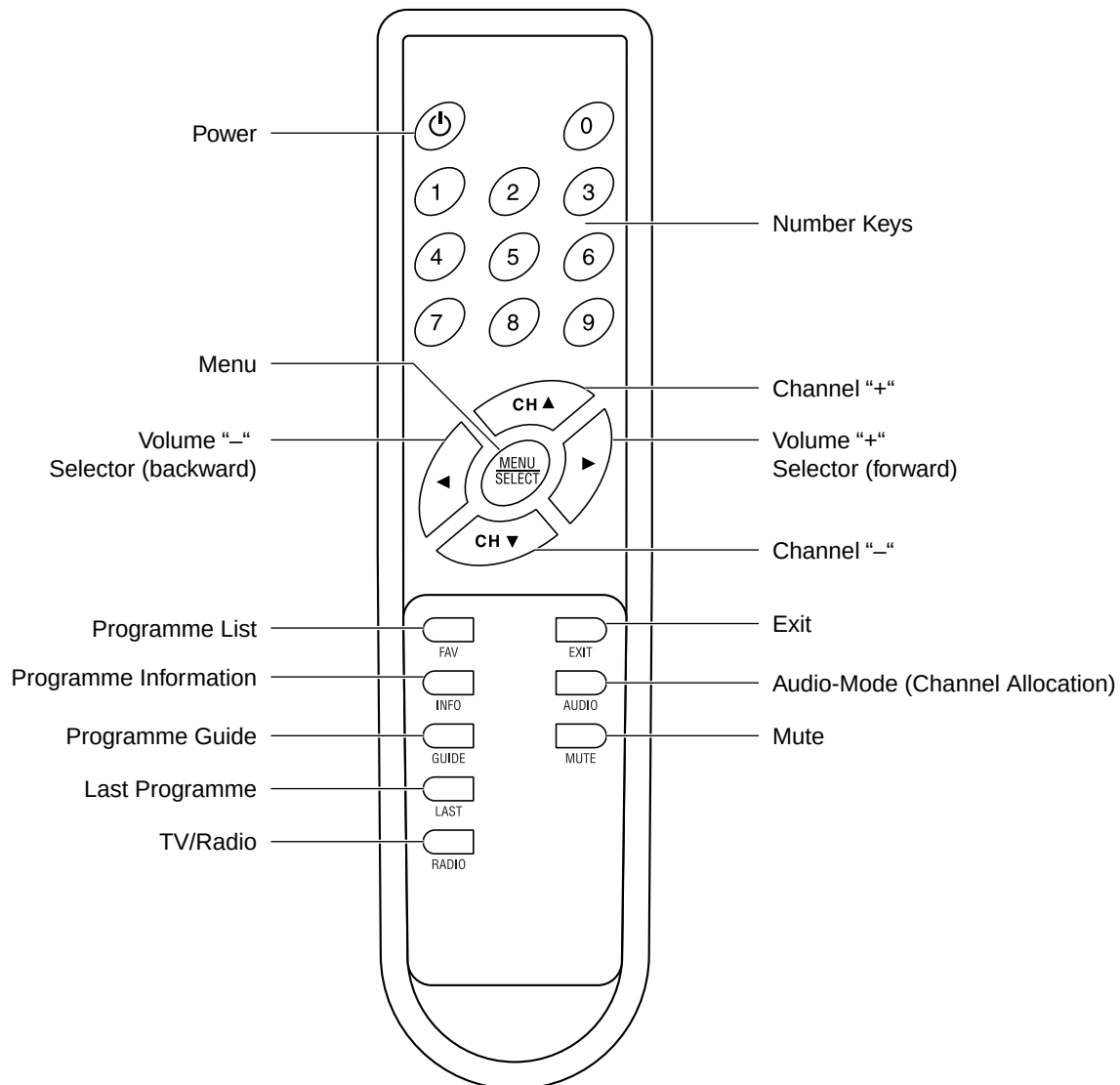
Disconnect the antenna cable in an electrical storm.

CAUTION:

Do not use any chemicals to clean the receiver - use a slightly damp cloth only!

4 Your Receiver and its Functions

4.1 Remote Control

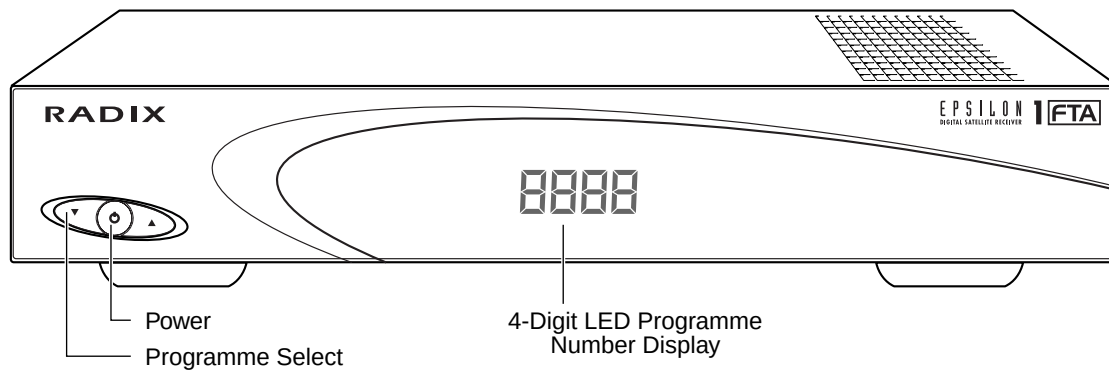


NOTE:

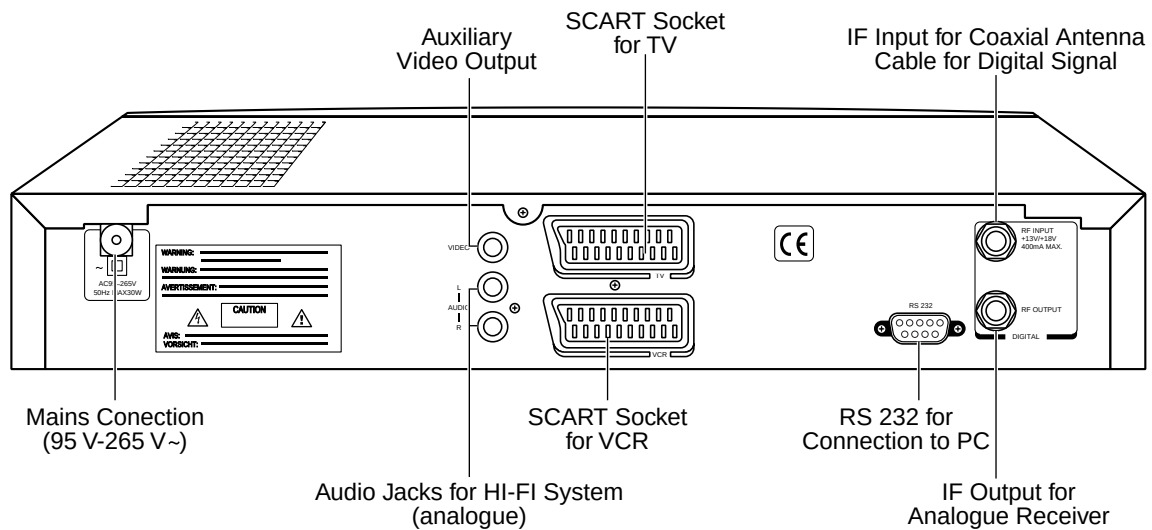
When fitting batteries, match the + and - signs on the batteries to the signs on the inside of the remote control

Your Receiver and its Functions

4.2 Receiver



Front of Receiver



Rear of Receiver

5 Installing Your Receiver

5.1 Before You Start



CAUTION:

Do not place the receiver near any heat sources or in strong sunlight.

Protect all cables from damage caused, for example, by sharp edges.

This appliance must only be used with a mains voltage of 230 V ($\pm 10\%$), 50 Hz.

Install the antenna in accordance with the manufacturers instructions.

All of the information needed for programming the receiver will be automatically called up:

- your time zone (= deviation from GMT – see appendix),
- summer time yes/no,
- picture format for your TV,
- The appropriate LNB oscillator frequency (referred to in the “LNB Local-Frequency” menu),
- Programme frequencies and polarities for manual programming (available in satellite magazines, specialist stores).

You must program the EPSILON 1 FTA before use. Full instructions are provided in Section 6.

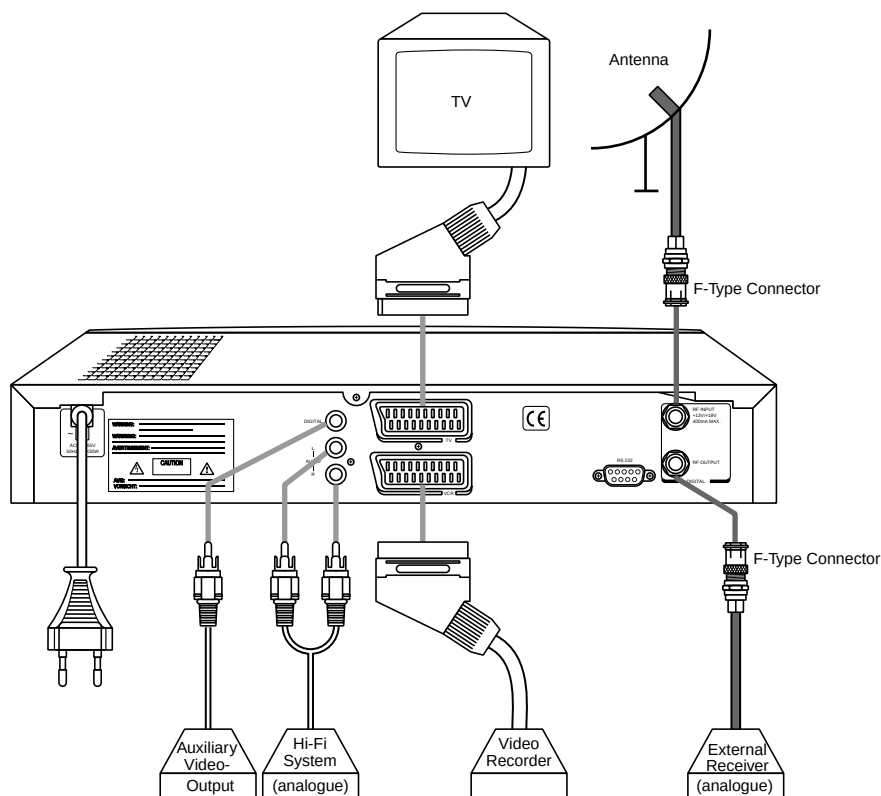
Installing Your Receiver

5.2 Connecting the Antenna and Other Devices



CAUTION:

Do not connect the receiver to the mains until you have correctly connected your VCR, TV and any other analogue receiver you may have.

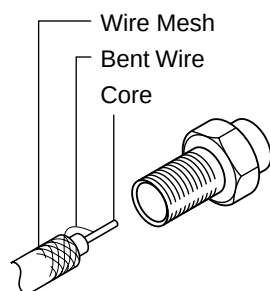


- Use double-shielded coaxial cable to connect the LNB to the receiver.



CAUTION:

When assembling the F-type connector, make sure that no part of the inner wire-mesh sheath touches the inner core (see diagram below). Failure to do so can cause a short-circuit and damage your receiver.



- Tighten the safety nut on the F-type connector by hand only. Do not over tighten!

6 Programming your Receiver

6.1 Switching On



- Press the Power button on your receiver.

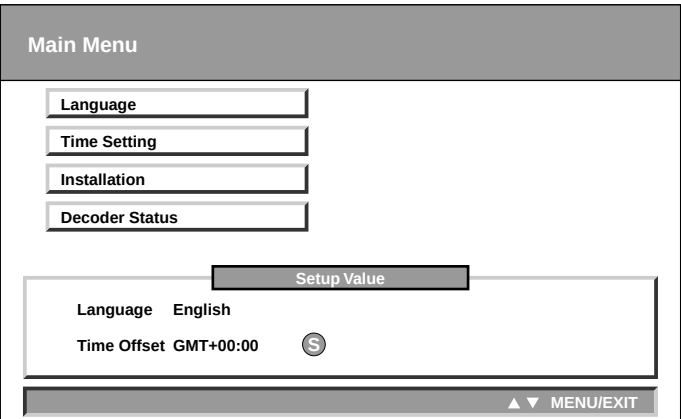
The ON message appears on the receivers display and the following screen appears:



- Press the Menu key to confirm your choice.

6.2 The Main Menu: Selecting a Language

The Main Menu appears on your TV screen:



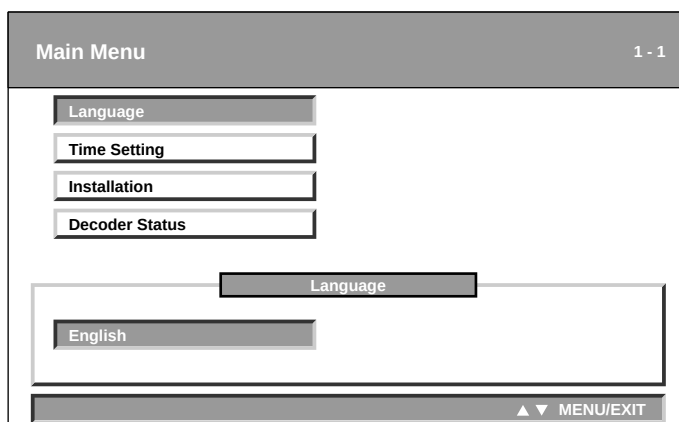
This menu allows you to programme your receiver. You will only need to do this when you set up your receiver for the first time or when adding new channels.

GB

Programming Your Receiver



- Use the CH▼-key to highlight the first field of the main menu, "Language."
- Choose a language and confirm your choice by pressing the MENU-key.

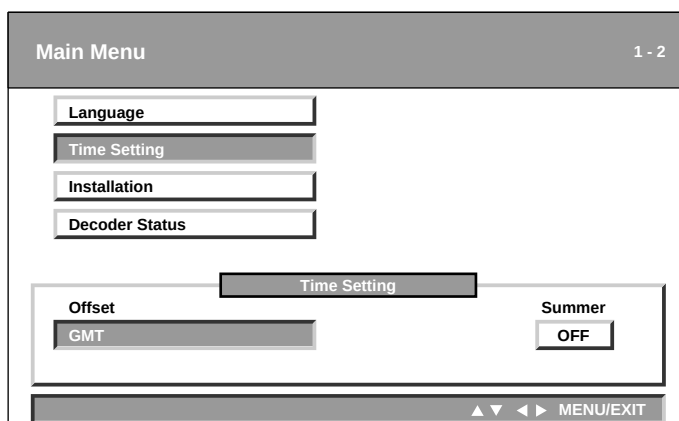


- Scroll through the list of languages using the CH▲-key and CH▼-keys and choose "Deutsch", "English", "Français" or "Italiano". Now press the Menu key to confirm.

6.3 The Main Menu: Setting the Correct Local Time



- Use the CH▼-key to highlight the "Time Setting" field of the main menu and confirm your choice by pressing the MENU-key.



- Use the CH▲-key or CH▼-key to set your local time zone (the departure of your local time zone from Greenwich Mean Time (GMT)) in 30-minute increments. If necessary, use the table of time zones appearing in the addendum to determine your local time zone. Once you have made your choice, confirm it by pressing the MENU-key.



- Use the CH►-key to highlight "Summer" (daylight-savings time) and confirm your choice by pressing the MENU-key.



- Use the CH▲-key or CH▼-key to select "ON" or "OFF" and confirm your choice by pressing the MENU-key.

6.4 The Main Menu: Setting Decoder Status



- Use the CH▼-key to highlight the "Decoder Status" field of the main menu and confirm your choice by pressing the MENU-key.

6.4.1 Selecting a TV Aspect Ratio



- Use the ▲-key or ▼-key to highlight the "TV Aspect Ratio" field of the main menu and confirm your choice by pressing the MENU-key.

Decoder Status 1 - 4 - 1

TV Aspect Ratio

DiSEqC Change

All Channel Clear

System Information

Setup Value

4 : 3 16 : 9

◀ ▶ MENU/EXIT



- Use the ◀-key or ▶-key to highlight the "Setup value" field, select your TV Aspect Ratio and confirm your choice by pressing the MENU-key.

6.4.2 Changing the DiSEqC Setting

NOTE:

Your satellite system must be equipped with a DiSEqC-switch if you intend to work with digital satellite equipment control (DiSEqC). (For detailed information on DiSEqC, refer to Section 6.5.3, below.)



- Use the ▼-key to highlight the "DiSEqC Change" field and confirm your choice by pressing the MENU-key.

Decoder Status 1 - 4 - 2

TV Aspect Ratio

DiSEqC Change

All Channel Clear

System Information

Setup Value

OLD	NEW	LNB Polar	Vertical
1	1	Band	Low
		Sat System	A

▲ ▼ ◀ ▶ MENU/EXIT



- Use the ◀-key or ▶-key to switch between highlighting the "OLD" and "NEW" fields and then use the ▼-key or ▲-key to select the desired setting.



- Confirm your choice by pressing the MENU-key.
- Press EXIT-key to exit this menu item.

Programming Your Receiver

6.4.3 Clearing the Receiver's Memory

CAUTION:

Clearing the receiver's memory will delete all settings that have been made and the receiver will have to be reprogrammed.



- Highlight the "All Channel Clear" field and confirm your choice by pressing the MENU-key. The following display will then appear onscreen:

Decoder Status1 - 4 - 3

TV Aspect Ratio

DiSEqC Change

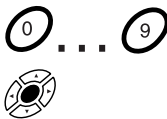
All Channel Clear

System Information

Setup Value

Input password

0...9MENU/EXIT



- Use the numerical keys to enter the password, which is **9-8-1-5**.
- Press the MENU-key to confirm that all data stored in the receiver's memory should be deleted.

6.4.4 Information on Decoder Status (System Information)

This menu item provides information on the status of your receiver's software.

- Highlight the "System Information" field and confirm your choice by pressing the MENU-key.

Decoder Status1 - 4

TV Aspect Ratio

DiSEqC Change

All Channel Clear

System Information

Setup Value

Data : 6. MAY. 99
Revision : ME 2.2 bNI
Firmware : 2.08A / 0.30 / 0.83

▲▼MENU/EXIT



- Press the EXIT-key to exit the "System Information" menu item.

6.5 The Main Menu: Installation - Automatically Installing Television Channels

Before the receiver will be able to receive any digital television channels, they will have to be loaded into its memory.

To make searching for television channels as simple as possible, the most common reception mode (ASTRA, General-Purpose LNB, DiSEqC A) has been preselected. If that preselection will serve your purposes, proceed as follows:



- Go to the main menu, highlight the "Installation" field, and confirm your choice by pressing the MENU-key.



- Use the ▼-key to highlight the "Auto Search" field and confirm your choice by pressing the MENU-key.

If that preselection will not serve your purposes, or if you would like to read in the reception mode for an additional satellite, such as "HOTBIRD," you may change each individual parameter by proceeding as follows:

6.5.1 Selecting a Satellite



- Use the ▲-key or ▼-key to highlight the "Installation" field and confirm your choice by pressing the MENU-key.

The screenshot shows the 'Installation' menu with the following fields and options:

Installation		1 - 3	
Satellite	Signal Strength		
LNB Lokal-Freq	Auto Search		
DiSEqC/22KHz	Manual Search		
Setup Value			
Satellite	ASTRA	DiSEqC	A
LNB Lokal	UNIVERSAL	AUTO	

At the bottom, there are navigation arrows and the text 'MENU/EXIT'.



- Use the ▲-key or ▼-key to highlight the "Satellite" field and confirm your choice by pressing the MENU-key.



- Use the ▲-key or ▼-key to highlight a satellite and confirm your choice by pressing the MENU-key.

6.5.2 Entering Your LNB-Converter's Local-Oscillator Frequency

Commercially available satellite systems employ general-purpose LNB-converter that use local-oscillator frequencies of 9,750 MHz for their lower band and 10,600 MHz for their upper band. If the local-oscillator frequencies of your receiver's LNB-converter should differ from those values, you may readjust your receiver by proceeding as follows:



- Use the ▲-key or ▼-key to highlight the "LNB Local Freq." field.



- Confirm your choice by pressing the MENU-key.

Programming Your Receiver

Installation1 - 3 - 2

Satellite

LNB Lokal-Freq

DiSEqC/22KHz

Signal Stength

Auto Search

Manual Search

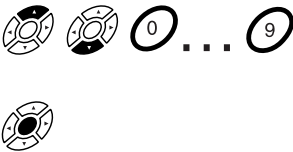
Setup Value

UNIVERSAL

MHz

0...9

MENU/EXIT



- Use the ▲-key or ▼-key to highlight one of the preset frequencies or enter your LNB-converter's local-oscillator frequency using the numerical keys.
- Confirm your choice/entry by pressing the MENU-key.

6.5.3 Adjusting the DiSEqC-Controller and/or Enabling/Disabling the 22-kHz Control Signal

NOTE:
This adjustment selects the correct segment of the frequency bands. The DiSEqC-controller (this feature will be available for use only if your satellite system is equipped with a DiSEqC-switch) incorporates all items of information needed for making this setting, i.e., upper/lower frequency band, horizontal/vertical polarization, and the type of satellite system involved.

Impostazioni DiSEqC:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	SAT A				SAT B				SAT C				SAT D			
Polarizzazione: orizzontale/verticale	14 V	14 V	18 V	18 V	14 V	14 V	18 V	18 V	14 V	14 V	18 V	18 V	14 V	14 V	18 V	18 V
Banda LNB: 9,75 GHz/10,6 GHz	9.75	10.6	9.75	10.6	9.75	10.6	9.75	10.6	9.75	10.6	9.75	10.6	9.75	10.6	9.75	10.6
Tono DiSEqC:	A	A	A	A	B	B	B	B	A	A	A	A	B	B	B	B
Opzione:	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2

The upper/lower frequency bands will have to be manually set by enabling or disabling the 22-kHz control signal if the satellite system in use is not equipped with DiSEqC. To make this setting, proceed as follows:



- Use the ▲-key or ▼-key to highlight the "DiSEqC/22 kHz" field and confirm your choice by pressing the MENU-key.



Installation 1 - 3 - 3

Satellite	Signal Strength
LNB Lokal-Freq	Auto Search
DiSEqC/22KHz	Manual Search

Setup Value

22KHz	A	DiSEqC	AUTO
-------	---	--------	------

▲ ▼ MENU/EXIT

- Use the ▲-key or ▼-key to switch the "22 kHz" option on or off or to select the desired DiSEqC-controller and confirm your choice by pressing the MENU-key.
- In order to be able to receive the largest number of channels, you will have to repeat the automatic channel-search procedure (cf. Section 6.5.4) for each setting of the DiSEqC-controller and each status (ON/OFF) of the 22-kHz control signal.

6.5.4 Automatic Channel Search

Once the settings covered under Sections 6.5.1 through 6.5.3, above, have all been made, you may conduct an automatic channel search over those downlink frequency bands that have been set.



- Use the ▲ and ▼-keys to highlight the "Auto Search" field:

Installation 1 - 3 - 5

Satellite	Signal Strength
LNB Lokal-Freq	Auto Search
DiSEqC/22KHz	Manual Search

Setup Value

Search complete
DF:3734 SR:5.832 3/26 New:5

EXIT



- Press the MENU-key to start the search.

While the search is in progress, a clock will appear at the lower right-hand corner of the screen. You will also see a blue bar indicating the extent of the frequency band that has thus far been searched. The other items appearing onscreen have the following meanings:

- | | | |
|----------|---|---|
| DF: | - | The satellite down-link frequency involved |
| SR:.... | - | The symbol rate |
| .../... | - | The ratio of the total number of transponders found to the total number of transponders available within the preset frequency band involved |
| New:... | - | The total number of new channels saved to the receiver's memory |

Programming Your Receiver

When the search has been concluded, the clock will disappear from the screen and the message "Search OK" should appear onscreen. If instead of this message the message "Search fail" should appear onscreen, then the settings made above will have to be checked, one after the other, in the order in which they were made and corrected wherever necessary until the search is successful.



- Press the EXIT-key to exit this menu and view a list of those channels that were found.

6.6 The Main Menu: Manual Search - Manually Installing TV-Channels

6.6.1 Entering TV-Channels' Frequencies

Once the settings/adjustments of Sections 6.5.1 through 6.5.4 have been concluded, you may manually install any channel falling within the preset broadcast band involved by proceeding as follows:



- While in the "Installation" menu, use the ▲-key or ▼-key to highlight the "Manual Search" field and confirm your choice by pressing the MENU-key.
- Use the ▲-key or ▼-key to highlight the "Video Frequency" field and confirm your choice by pressing the MENU-key.



Manual Search 1 - 3 - 6

Down Frequency

Symbol Rate

LNB Polarity

Video PID auto

Audio PID auto

Start Search

Setup Value

LNB Lokal	10600MHz	DiSeqC	4
Video Freq	11837MHz	LNB Polar	Horizontal
Symbol Rate	27.500MHz	22KHz	ON

▲ ▼ MENU/EXIT



- Use the numerical keys to enter the desired downlink frequency (refer to satellite-television magazines for lists of the downlink frequencies of the various broadcast channels).
- Pressing the EXIT-key will delete the entire entry.
- Pressing the ◀-key will delete the rightmost digit of the entry.
- Once the entry is correct, press the MENU-key to confirm it.



Manual Search 1 - 3 - 6 - 1

DownFrequency

Symbol Rate

LNB Polarity

Video PID auto

Audio PID auto

Start Search

Setup Value

3700 MHz

①...⑨ MENU/EXIT

6.6.2 Entering the Symbol Rate



- Use the ▲ and ▼-keys to highlight the "Symbol Rate" field and then press the MENU-key to confirm your selection.

Manual Search1 - 3 - 6 - 2

Down Frequency

Symbol Rate

LNB Polarity

Video PIDauto

Audio PIDauto

Start Search

Setup Value

28.100MHz

0...9MENU/EXIT



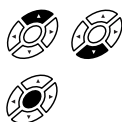
- Use the numerical keys to enter the desired symbol rate (SR) (refer to satellite-television magazines for lists of symbol rates).
- Pressing the EXIT-key will delete the entire entry.
- Pressing the ◀-key will delete the rightmost digit of the entry.
- Once the entry is correct, press the MENU-key to confirm it.

Programming Your Receiver

6.6.3 Selecting the Polarization

NOTE:

If a DiSEqC-controller is in use, this setting will be preset by the controller and thus need not be repeated.



- Use the ▲ and ▼-keys to highlight the "LNB Polarity" field.
- Press the MENU-key.

Manual Search 1 - 3 - 6 - 3

Down Frequency	Video PID auto
Symbol Rate	Audio PID auto
LNB Polarity	Start Search

Setup Value

Horizontal

◀ ▶ MENU/EXIT



- Use the ◀ and ▶-keys to select either "Horizontal" or "Vertical" polarization (listed in satellite-television magazines).



- Press the MENU-key to confirm your entry.

6.6.4 Setting Video PID-Codes

Many channels will remain undetected by either an automatic or a manual channel search due to their poor identification, in which case you may manually enter their proportional-integral-differential codes (PID-codes, which appear listed in satellite-television magazines), which will allow you to receive them.



- Use the ▲-key or ▼-key to highlight the "Video PID" field.
- Enter the desired PID-code using the numerical keys and confirm your entry by pressing the MENU-key.

Manual Search 1 - 3 - 6 - 4

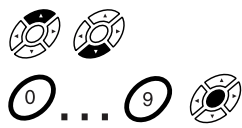
Down Frequency	Video PID auto
Symbol Rate	Audio PID auto
LNB Polarity	Start Search

Setup Value

0

EXIT

6.6.5 Setting Audio PID-Codes



- Use the ▲-key or ▼-key to highlight the "Audio PID" field.
- Enter the desired PID-code using the numerical keys and confirm your entry by pressing the MENU-key.

Manual Search1 - 3 - 6 - 5

Down Frequency

Symbol Rate

LNB Polarity

Video PIDauto

Audio PIDauto

Start Search

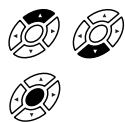
Setup Value

0

EXIT

6.6.6 Conducting a Search

Before conducting a search, make certain that all selections from, or entries into, the "Manual Search" menu have been concluded. Once they have been concluded, you may initiate an automatic search for all channels broadcasting within the preset frequency bands involved.



- Use the ▲-key or ▼-key to highlight the "Start Search" field.
- Press the MENU-key to start the search.

Manual Search1 - 3 - 6 - 6

Down Frequency

Symbol Rate

LNB Polarity

Video PIDauto

Audio PIDauto

Start Search

Setup Value

SETUP VALUE
DF:4000 SR:28.125 New:18

EXIT

While the search is in progress, a clock will be inserted at the lower right-hand corner of the screen and a blue bar will indicate the extent of the frequency band that has thus far been searched. The meanings of the other items that appear onscreen are as follows:

DF:	The satellite downlink frequency.
SR: ...	The symbol rate.
.../...	The ratio of the number of channels found to the total number of channels available within the frequency band involved.
New: ...	The total number of new channels saved to the receiver's memory.

Programming Your Receiver

The message "Search concluded" will appear onscreen when the clock disappears. However, if either of the messages "Out of search range." or "Search failed." should appear onscreen, check the settings you have made one after the other, correct them, and continue correcting them until the search is successful.



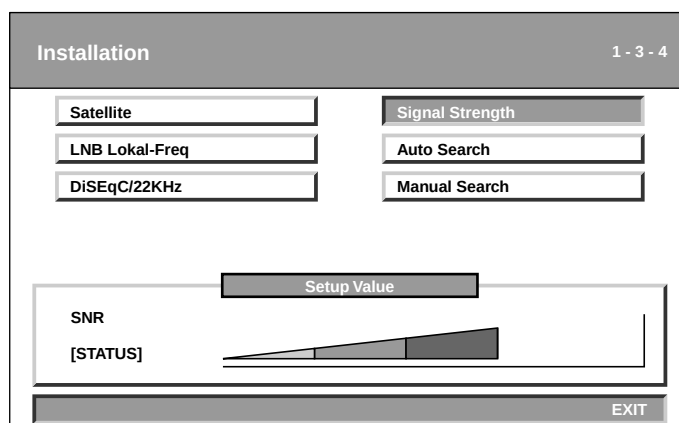
- Press the EXIT-key to exit this menu item.

6.6.7 Checking Signal Strength

You should check the alignment of your satellite antenna on a regular basis if you want to have the best-possible reception.



- Use the ▲ and ▼-keys to highlight the "Signal Strength" field and then press the MENU-key.



The legend "[STATUS]" will appear onscreen for a few seconds, when it will be replaced by "[LOCK]," accompanied by a triangular figure. If the latter has only yellow and red segments, then the received signal strength is weak.

- Cautiously realign the antenna until the triangular figure reaches maximum size.

You will then have the best-possible reception of the broadcast signal.

If the legend "[UNLOCK]" should appear following "[STATUS]," check the cabling interconnecting the antenna and the receiver and the parameter settings covered in the preceding sections.



- Press the EXIT-key to exit this menu.

6.7 Editing Transponder Data

6.7.1 Procedures for Editing Transponder Data



- In the main menu, highlight the "Installation" field and confirm your selection by pressing the MENU-key.



- Highlight the "Satellite" field and confirm your selection by pressing the MENU-key.

Programming Your Receiver

Installation

1 - 3

Satellite

LNB Lokal-Freq

DiSEqC/22KHz

Signal Strength

Auto Search

Manual Search

Setup Value

Satellite	ASTRA	DiSEqC	A
LNB Lokal	UNIVERSAL	AUTO	

▲ ▼ ◀ ▶ MENU/EXIT



0 . . . 9



- Press the Info-key on your remote control unit and then enter the password, **9-8-1-5**, using the numerical keys.
- Confirm your entry by pressing the MENU-key.

Transponderdate - Edit

01	ASTRA	1	TP	H/V	SR
02	EUTELSAT				
03	ASIASAT2				
04	PANAMSAT2				
05	PANAMSAT4				
06	INTEL602				
07	INTEL604				
08	INTEL703				

▲ ▼ MENU/EXIT

You may now edit the transponder data shown.

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Programming Your Receiver

6.7.2 Adding Another Transponder



- In the "Transponderdate – Edit" menu, highlight a satellite and confirm your selection by pressing the MENU-key.

Transponderdate - Edit

01	ASTRA			
02	EUTELSAT			
03	ASIASAT2			
04	PANAMSAT2			
05	PANAMSAT4			
06	INTEL602			
07	INTEL604			
08	INTEL703			

\	TP	H/V	SR
49	12582	V	22.000
50	12670	V	22.000
51		-	-

▲ ▼ ◀ ▶ MENU/EXIT



- Press the ►-key to enter the table on the right and then highlight its last line by pressing the MENU-key.



- Use the ►-key to highlight the field in the "TP" column and then use the numerical keys to enter the transponder's frequency.



- Press the ►-key to transit to the next field and then use the ▲-key or ▼-key to set the transponder's polarity (H/V).



- Use the ►-key to highlight the field in the "SR" column and then enter the transponder's symbol rate using the numerical keys.



- Confirm your entries by pressing the MENU-key.
Once you have confirmed your entries, the next vacant line beneath the line you have entered will appear onscreen in order to allow you to add further transponders, if desired.

6.7.3 Adding Another Satellite

If you would like to add another satellite to those that have been factory-installed, then you will have to perform the following procedures before undertaking the procedures stated under 6.7.2 above:



- In the "Transponderdate – Edit" menu, highlight the line immediately beneath the last satellite listed and confirm your selection by pressing the MENU-key.

Transponderdate - Edit

18	SIRIUS1 2	\	TP	H/V	SR
19	AMOS 1				
20	TELECOM2B				
21	NILESAT				
22	-				

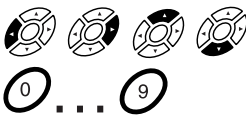
A B C 8

0...9

▲▼

▶◀

MENU/EXIT



- Enter the name of the satellite involved, which consists of a maximum of 12 alphanumeric characters, into the middle line by using the ◀-key or ▶-key to highlight the position involved and then using the ▲-key or ▼-key to select the letter required or the numerical keys to enter the numeral involved.



- Confirm your entry by pressing the MENU-key, which will automatically activate the revised table.
- Enter all of the necessary data, following the procedures stated under Section 6.7.2, above

6.7.4 Editing Transponder Data

NOTE:

You may edit or delete only transponder data that you have entered yourself. Factory-preset transponder data cannot be edited or deleted.

- To edit transponder data, first highlight the line to be edited and then proceed as stated under Section 6.7.2 or 6.7.3, above.
- Overwrite the data listed, item by item.
- Either press the EXIT-key to abort editing or press the MENU-key to confirm the editing you have done.



Using your Receiver

6.7.5 Deleting a Transponder

NOTE:

Deleting all data for a satellite will delete the satellite.



- In the "Transponderdate – Edit" menu, highlight a satellite and confirm your selection by pressing the MENU-key.



- Highlight a field in the table.

Transponderdate - Edit

01	ASTRA	\	TP	H/V	SR
02	EUTELSAT	49	12582	V	22.000
03	ASIASAT2	50	12670	V	22.000
04	PANAMSAT2	51	12260	H	22.000
05	PANAMSAT4	52	12222	V	27.500
06	INTEL602	53	-	-	-
07	INTEL604				
08	INTEL703				

Press ◀ to delete, press ▶ to change

◀ ▶ MENU/EXIT



- Confirm your selection by pressing the MENU-key.
- Either delete the highlighted data by pressing the ◀-key or press the EXIT-key to abort the deletion.

7 Using your Receiver

Once you have finished all of the basic settings described above, you can begin using your receiver.

NOTE:

Digital communications involve the transfer and processing of large amounts of data simultaneously. This means that there may be a slightly longer delay when changing channels compared to traditional TV.

7.1 Switching your Receiver On



- Press the Power button on your receiver. Now press the Power key on your remote control.

7.2 Selecting Channels



- Use the number keys to select the channel of your choice (see also "Programme Lists" in Section 8).

NOTE:

Although channel numbers have three digits, e.g., 001, you may enter either single-digit, double-digit, or triple-digit channel numbers, e.g., 1, 13, or 135, and the receiver will adjust to your entry after three seconds have elapsed.



- Use CH▲-key to move to the next highest channel. Use the CH▼-key to move to the next lowest channel.



- To go to the last channel you visited, press the "Last" key.

Each time you change channel, the channel number, date, time and "Channel Change" are displayed on your TV screen.

If the new channel is on the same frequency as the previous one, it will appear and the information mentioned above will be displayed. If the channel is on a different frequency, the message "Tuning HF Signal" appears. The new channel takes slightly longer to appear.

The information displayed by the receiver remains on your screen for approximately three seconds or until you press the Exit key.

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7.3 Volume Control/Mute Sound



- Use the ► or ◀-keys to adjust the volume.



- Use the Mute key to mute the sound: 



- To restore the sound, press the Mute key again or press the ►-key.

The on-screen display disappears after a few seconds.

7.4 Listening to the Radio

In addition to television programmes, many broadcasters transmit their radio programmes in digital HIFI format.



- Press the Radio key to switch from TV to Radio mode.



- Use the channel keys ▲ or ▼ to scroll through the channels as you would in TV mode.



- Press the Last key to return to the previous channel.



- To return to TV mode, press the Radio key again.

All programme list functions can be used in both Radio and TV mode.

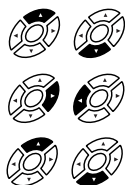
Programme Lists and Information

7.5 Selecting the Audio Mode

Several broadcasters transmit their TV programmes in different languages and audio formats.



- Press the Audio key and select the field on the left using the volume keys ► or ◀ to choose one of the available languages:



- Use the channel keys ▲ or ▼ to change the language setting.
- Use the volume keys ► or ◀ to select the field on the right.
- Select one of the following options using the channel keys ▲ or ▼:

Stereo (L+R)	– left and right
Mono1 (L+L)	– left only
Mono2 (R+R)	– right only
Swap (R+L)	– alternating



- Press the Audio key again to return to TV mode.

8 Programme Lists and Information

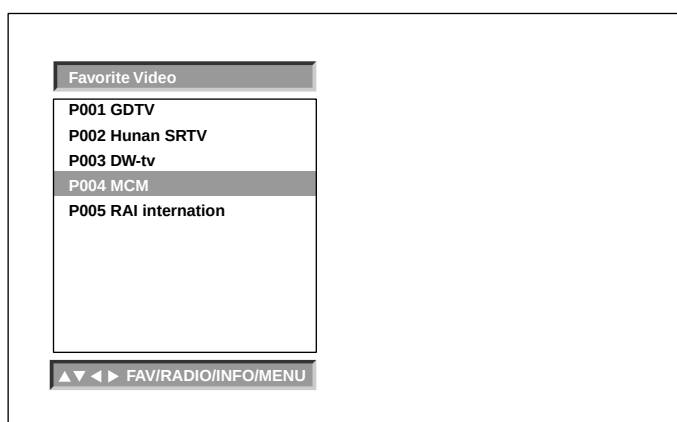
Digital television offers you hundreds of channels and it's easy to lose track of your favourites. To help you find your favourite programmes quickly and easily, you can create programme lists (Favorite Menu).

8.1 Displaying a Programme List

8.1.1 Full-Screen Mode



- Press the FAV key while watching a programme:

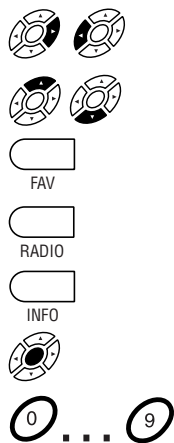


NOTE:

The current channel being displayed in the background is changed if the programme number is selected for more than a few seconds.

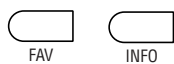
Programme Lists and Information

You can use the following functions:

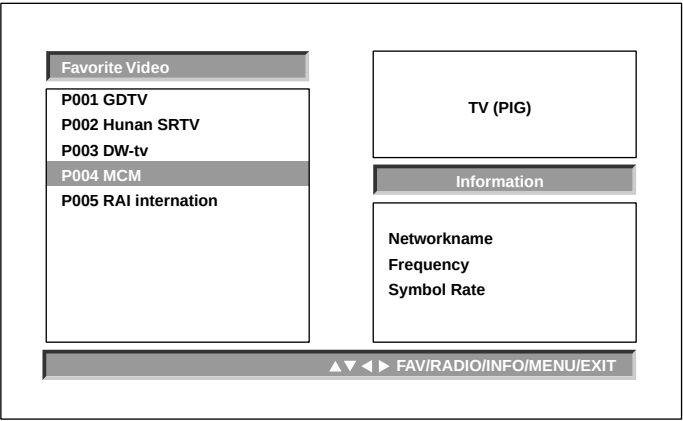


- Use the volume keys ► or ◀ to scroll or to place a programme.
- Use the channel select keys ▲ or ▼ to select or to place a programme.
- Press the FAV key to create or change your list of favourites (see Section 8.2).
- Press the Radio key to switch to radio mode.
- Press the INFO key to see programme information.
- Press the Menu key to store your programme list.
- Use the number keys to select a programme directly.

8.1.2 Compact View Mode



- Press the FAV and INFO keys while viewing a programme:



The same functions are available here as in full screen mode.



Programme Lists and Information

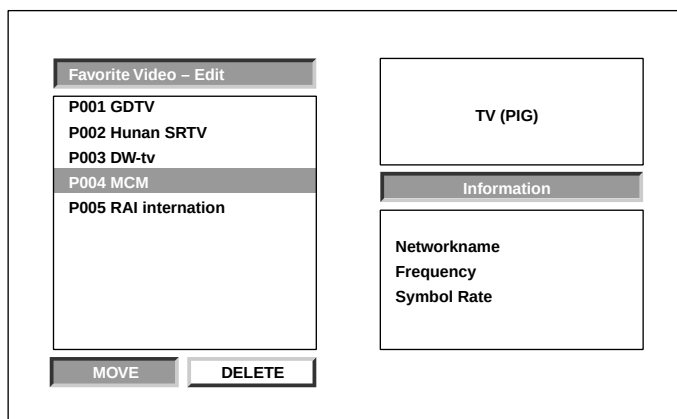
8.2 Editing your Programme Lists (List of Favourites)

The following steps apply to both TV and Radio modes. At the bottom of the screen, you can see a list of function keys for this screen: Change (arrow or number keys), Confirm (Menu key), Close menu (Exit key).

8.2.1 Moving a Programme



- Press the FAV-key while viewing a programme to open the Favourite menu:



- Select "Move" and press the Menu key to confirm



- Either use the ▲-key or ▼-key to highlight the channel you want to move or enter its channel number using the numerical keys.



- Press the Menu key to confirm.



- Using the channel, volume or number keys ▼ or ▲, select the location where you want to move the programme to.



- Press the Menu key to confirm.
- Repeat this procedure to move other programmes.



- To close the menu, press the Exit key twice.

NOTE:

Your receiver stores the list you edited in its memory. An hourglass appears on-screen while it does so.

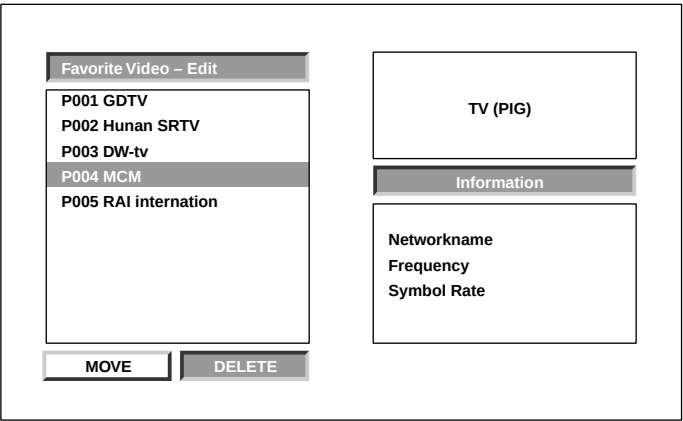
8.2.2 Deleting a Programme



- Press the FAV key while in the programme list.



- Select "Delete" using the ►-key and press the Menu key to confirm.



- Confirm the deletion by pressing the MENU-key.

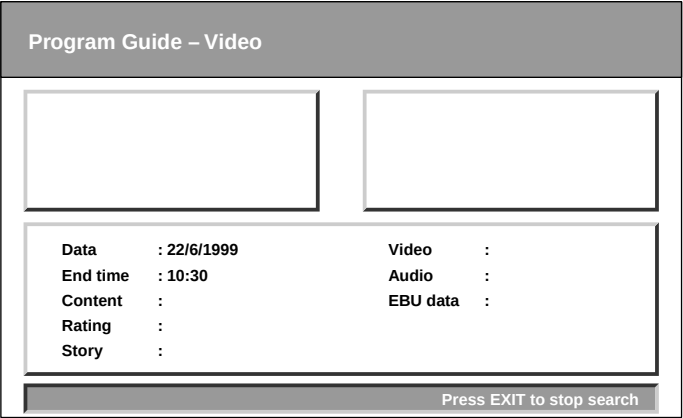
Continue, following the procedures stated under Section 8.2.1, above.

8.3 Programme Information

Digital television allows broadcasters to transmit an electronic TV guide and other additional information along with the signal. Unfortunately this capability is not utilised by all TV broadcasters.



- While viewing a programme, press the GUIDE key to open the following overview screen:



In addition to the programme overview, the following information is also available:

<u>Video:</u>	<u>Content:</u>
4:3	Feature Film / Drama
16:9	News
16:9 (pan vector)	Show / Gameshow
> 16:9	Sport
	Kids / Teens
<u>Audio:</u>	Music / Dance
Single mono	Art / Culture
Dual mono	Social / Politics / Economy
Stereo	Education / Learning
Multilingual	Leisure
Surround	Special

Trouble Shooting

EBU Information:

Teletext Subtitles
Teletext
Subtitles
Subtitles (4:3)
Subtitles (16:9)
Subtitles (2.21:1)

Suitability:

Over 7 years of age



Press the Exit key to stop the programme operation.

- Use the channel select and volume keys ▼, ▲, ► or ◀ to select the appropriate options and display the additional information.



- Press the Exit key to exit the programme overview.

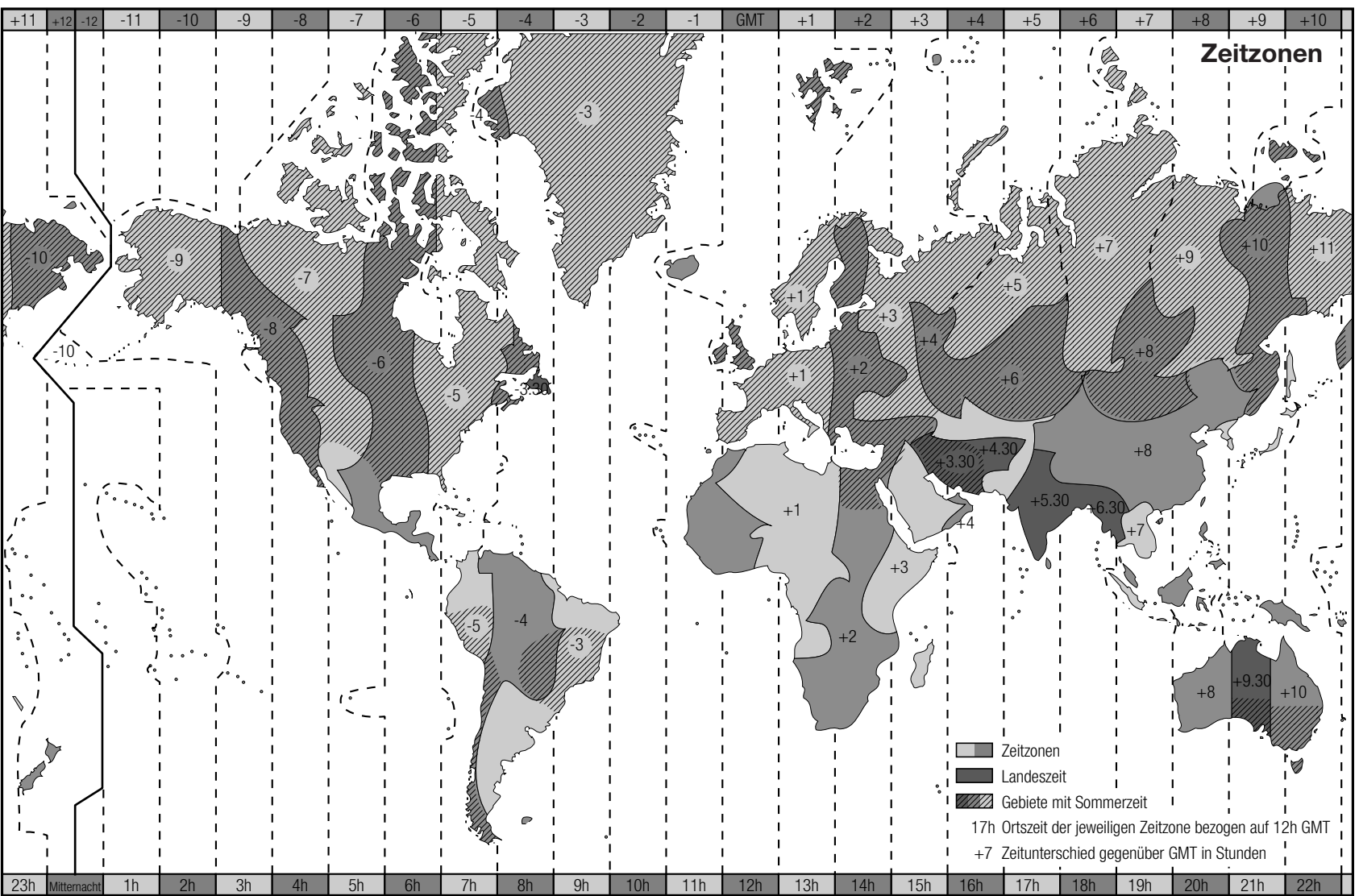
9 Trouble Shooting Your digital Receiver

Problem	Possible Causes	Solution
No picture but on-screen menus appear	Satellite system is faulty in correctly installed, Faulty LNB	Check all connections and leads, adjust satellite antenna, Check LNB
	High levels of signal loss through cables	Replace cables or use a signal booster
	Faulty LNB	Replace LNB
	Faulty connection (Water/corrosion damage)	Repair connection
No stereo sound	Incorrect cable connecting TV and receiver	Check SCART cable
Remote control not working	Batteries exhausted	Replace batteries
	Remote control not pointed at device	When using remote control, make sure it is pointing at device

10 Recycling and Disposal

Please dispose of the device, packaging such as polystyrene and all batteries in accordance with your local regulations and recycle wherever possible.

Version 1.0



Appendix

11.2 Technical specification

TUNER

IF Input frequency	920...2150 MHz
IF Loop through output	920...2150 MHz
IF Bandwidth	36 MHz
Input impedance	75 ohms
Input signal level	- 65 dbm...- 25 dbm
LNB Polarization switching voltage	13/18 V DC @ max 400 mA, Short Circuit Protection
Band switching	22 kHz Tone
I/Q Output	Unbalanced Output, Controlled by AGC Input

FRONT-END DEMODULATOR

Demodulation capacity	QPSK Demodulation
Symbol rate	2 ~ 35 Msps (SCPC, MCPC)
Viterbi decoding rate	1/2, 2/3, 3/4, 5/6, 7/8, 8/9
Reed solomon decoding	FEC : 204, 188, t = 8

TRANSPORT DEMULTIPLEXER

Demultiplex	According to ISO/IEC 13818-1
max. input stream	60 MHz (serial) / 7,5 MHz (parallel)
PID Handling capability	32 PID
SI Filtering	According to DVB-SI spec (ETS 300 468)

VIDEO DECODING PARAMETERS

Video decoding	ISO/IEC 13818-2 MP@ML
Aspect ratio	4:3, 16:9, Pan&Scan, LetterBox
Resolution	max. 720 x 576

AUDIO DECODING PARAMETERS

Audio decoding	ISO/IEC 13818-3 Layer I & II
Operating mode	Mono, Dual, Stereo, Joint Stereo
Sampling frequency	16, 22.05, 24, 32, 44.1, 48 kHz

MICROPROCESSOR AND MAIN MEMORIES

Microprocessor type	MC 68340 (16 MHz)
Processing rate	4.7 MIPS
Flash ROM (for program memory)	512 Mbytes (256 K x 16)
DRAM	2 Mbytes (1 M x 16)
Flash ROM (for data memory)	128 Kbytes (64 K x 16)

DATA SERVICE PORT

Connector	9 Pin D-Female Type
Protocol	RS-232 Asynch
Data rate	max. 19200 bps

GENERAL DATA

Input power voltage	AC 190...260 V, 50 Hz
Power consumption	max. 30 Watts
Dimension	337 x 240 x 69 mm
Weight	2,5 kg
Operation temperature	0...40 Deg.

FRONT PANEL

4 digits LED Display	Channel Numbers Display
3 Buttons	Power, Down, Up
IR Sensor	38 kHz

REAR PANEL

Digital IF-Input	F-Female Type
Digital IF-Output (Loop-through)	F-Female Type
RCA Output	3 RCA (left, right, Video)
RS 232 Port	9 Pin D Female Type
2 Scart Output	1 TV, 1 VCR
SAT	
IR Sensor	38 kHz
Power Cord	Europe Flexible Cord
VCR, TV SCART OUTPUT	
Video Output Impedance	75 ohms
Video Output Level	1,0 Vpp by 75 ohms
Audio Output Impedance	600 ohms unbalanced
Audio Output Level	3,0 Vpp with Volume Control

REMOTE CONTROL UNIT (UNIVERSAL)

Universal Remote Control	IR (Carrier Freq. 38 kHz)
Battery	2 x 1.5 V AA
24 Keys	Power, 0...9, Audio, Mute, Info, Up, Down, Left, Right, Menu/Select, Exit, Guide, Fav, Last, Radio